# CHAPTER II: PROPOSAL PREPARATION INSTRUCTIONS

Organizations applying for the first time, or which have not received an NSF award within the preceding two years, should refer to GPM Section 501 (http://www.nsf.gov/cgi-bin/getpub?gpm), for instructions on specific information that may be requested by NSF or consult the *Prospective New Awardee Guide* (NSF 99-78) on the NSF website at http://www.nsf.gov/bfa/cpo/oversite/start.htm.

To facilitate proposal preparation, Frequently Asked Questions (FAQs) regarding proposal preparation and submission are available electronically on the NSF website at http://www.nsf.gov/bfa/cpo/policy/ques.htm. FAQs regarding FastLane proposal preparation and submission are available at http://www.fastlane.nsf.gov/a0/about/a1faq.htm.

#### A. CONFORMANCE WITH INSTRUCTIONS FOR PROPOSAL PREPARATION

It is important that all proposals conform to the instructions provided in the GPG. Conformance is required and will be strictly enforced unless a deviation has been approved. Proposals that are not consistent with these instructions may not be considered by NSF. Particular attention is given to proposal length, content and formatting, including the page limitation on the Project Description and other proposal sections, such as the use of Appendices and required content of the Biographical Sketches.

Any deviations from these instructions must be authorized in advance by NSF. Deviations may be authorized in one of two ways:

- 1. through specification of different requirements in an NSF solicitation; or
- 2. by the written approval of the cognizant NSF Assistant Director/Office Head or designee. These deviations may be in the form of a "blanket deviation" for a particular program or programs or, in rare instances, an "individual" deviation for a particular proposal.

Proposers may deviate from these instructions only to the extent authorized. Proposals must identify the deviation in one of the following ways as appropriate: (a) by identifying the program solicitation number that authorized the deviation in the appropriate block on the Cover Sheet; or for individual deviations, (b) by identifying the name, date and title of the NSF official authorizing the deviation.<sup>12</sup> Further instructions are available on the FastLane website.

#### **B. FORMAT OF THE PROPOSAL**

#### 1. Proposal Pagination Instructions

Proposers are advised that FastLane does not automatically paginate a proposal. Each section of the proposal that is submitted through use of a PDF file must be paginated.

# 2. Proposal Margin and Spacing Requirements

Proposals must have 2.5 cm margins at the top, bottom and on each side. The type size must be clear and readily legible, and conform to the following three requirements: 1) the height of the letters must not be smaller

<sup>&</sup>lt;sup>12</sup> Requests for approval of a deviation from NSF's electronic submission requirement must be forwarded to the cognizant NSF program for review and approval prior to submission of the paper proposal.

than 10 point; 2) type density must be no more than 15 characters per 2.5 cm; (for proportional spacing, the average for any representative section of text must not exceed 15 characters per 2.5 cm); and 3) no more than 6 lines must be within a vertical space of 2.5 cm. The type size used throughout the proposal must conform to all three requirements. While line spacing (single-spaced, double-spaced, etc.) is at the discretion of the proposer, established page limits must be followed. (Individual program solicitations may eliminate this proposer option.)

While the guidelines specified above establish the **minimum** type size requirements, PIs are advised that readability is of paramount importance and should take precedence in selection of an appropriate font for use in the proposal.

# C. SECTIONS OF THE PROPOSAL

- Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors
- Deviation Authorization (if applicable)
- List of Suggested Reviewers or Reviewers Not to Include (optional)
- Cover Sheet for Proposal to the National Science Foundation (NSF Form 1207)
- A Project Summary
- B Table of Contents
- C Project Description (including Results from Prior NSF Support)
- D References Cited
- E Biographical Sketches
- F Proposal Budget (cumulative and annual budgets, including subaward budget(s), if any, and up to three pages of Budget Justification)
- G Current and Pending Support
- H Facilities, Equipment and Other Resources
- I Special Information and Supplementary Documentation
- J Appendices (Include only if approved in advance of proposal submission by NSF Assistant Director/Office Head, or designee, or by program solicitation)

# Information About Principal Investigators/Project Directors and co-Principal Investigators/co-Project Directors

NSF is committed to providing equal opportunities for participation in its programs and promoting the full use of the Nation's research resources. To aid in meeting these objectives, NSF requests information on the gender, race, ethnicity and disability status of individuals named as Pls/co-Pls on proposals and awards. Except for the required information about current or previous Federal research support and the name(s) of the Pl/co-Pl, submission of the information is voluntary, and individuals who do not wish to provide the personal information should check the box provided for that purpose.

#### Deviation Authorization (If applicable)

Instructions for obtaining a deviation from NSF proposal preparation instructions are provided in Chapter II, Section A.

# List of Suggested Reviewers or Reviewers Not to Include (optional)

Proposers may include a list of suggested reviewers that they believe are especially well qualified to review the proposal. Proposers also may designate persons they would prefer not review the proposal, indicating why. These suggestions are optional. The cognizant Program Officer handling the proposal considers the suggestions and may contact the proposer for further information.

# Cover Sheet for Proposal to the National Science Foundation (NSF Form 1207, Pages 1 and 2)

Proposers are required to select the applicable program announcement, solicitation or program description. If the proposal is not submitted in response to a specific program announcement, solicitation, or program description, proposers should select "*Grant Proposal Guide*." Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Proposers must then follow instructions for selection of an applicable NSF Division and Program(s) to which the proposal should be directed.

A block is included for the proposer to enter its organization's Data Universal Numbering System (DUNS) number. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services. If the proposer does not have a DUNS number, it must contact Dun and Bradstreet by telephone directly at (800) 333-0505 to obtain one. A DUNS number will be provided immediately by telephone at no charge.

Should the project be performed at a place other than where the award is to be made, that should be identified in the block entitled, "Name of Performing Organization." Examples are as follows:

#### Grantee Organization Performing Organization

Northern Virginia University Northern Virginia University Health Center

Southern Virginia University Research Foundation Southern Virginia University

The title of the project must be brief, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press. NSF may edit the title of a project prior to making an award.

Some NSF program solicitations require submission of both a preliminary and full proposal as part of the proposal process. A block is provided to identify, in submission of the full proposal, any related preliminary proposal number assigned by NSF.

The proposed duration for which support is requested must be consistent with the nature and complexity of the proposed activity. Grants are normally awarded for up to three years but may be awarded for periods of up to five years. The Foundation encourages Pls to request awards for durations of three to five years when such durations are necessary for completion of the proposed work and when such durations are technically and managerially advantageous. Specification of a desired starting date for the project is important and helpful to NSF staff; however, requests for specific effective dates may not be met. Except in special situations, requested effective dates must allow at least six months for NSF review, processing and decision. Should unusual situations (e.g., a long lead time for procurement) create problems regarding the proposed effective date, the PI should consult his/her organization's sponsored projects office.

Should any of the listed items on the Cover Sheet apply to a proposal, the appropriate box(es) must be checked.

The proposer must sign page 2 of the Cover Sheet (NSF Form 1207) to submit the following required certifications:<sup>13</sup>

<sup>&</sup>lt;sup>13</sup>NSF is currently assessing the results from two pilot projects regarding use of electronic signatures in submission of proposals to NSF. Upon completion of this assessment, an addendum may be issued to the *Grant Proposal Guide* that revises the proposal certification process.

Certification for Principal Investigators and Co-Principal Investigators: The PI (and co-PIs) are required to complete certifications regarding statements contained in the proposal, authorship and reporting of the research and scientific conduct of the project. The signature(s) of the PI (and co-PIs) (including date of signature(s)) are required.

Certification for Authorized Organizational Representative or Individual Applicant: The Authorized Organizational Representative (AOR) is required to complete certifications regarding the accuracy and completeness of statements contained in the proposal; as well as to certify that the organization (or individual) agrees to accept the obligation to comply with award terms and conditions. The AOR's signature (including date of signature) is required. It is the proposing organization's responsibility to assure that only properly authorized individuals sign in this capacity.

**Certification Regarding Conflict of Interest:** A certification also is included that requires an organizational representative to certify that the institution has implemented and is enforcing a written policy on conflicts of interest consistent with the provisions of GPM Section 510; that, to the best of his/her knowledge, all financial disclosures required by the conflict of interest policy were made; and that conflicts of interest, if any, were, or prior to the institution's expenditure of any funds under the award, will be, satisfactorily managed, reduced or eliminated in accordance with the institution's <sup>14</sup> conflict of interest policy. Conflicts that cannot be satisfactorily managed, reduced or eliminated must be disclosed to NSF.

**Drug-Free Workplace:** The AOR (or individual applicant) is providing the Drug-Free Workplace Certification by signing page 2. See Appendix A for the full text of the Drug-Free Workplace Certification.

**Debarment and Suspension:** The AOR is required to complete the Debarment or Suspension question by checking the appropriate box.

**Certification Regarding Lobbying:** The certification on Lobbying Restrictions, entitled *Certification for Contracts, Grants, Loans and Cooperative Agreements*, is included in full text on page 2 of the Cover Sheet. This certification is required when the proposal exceeds \$100,000. Only if, pursuant to paragraph 2 of the certification, submission of the "*Disclosure of Lobbying Activities*," SF LLL, is required, must the box for "Disclosure of Lobbying Activities" be checked on the Cover Sheet. A copy of this form may be obtained from the Policy Office at (703) 292-8243 or by e-mail to policy@nsf.gov. A fax number or mailing address should be provided with the request.

See also Page 2 of the Cover Sheet for important considerations regarding completion of the required certifications.

Profit-making organizations must certify their status by completing each of the appropriate submitting organization boxes on the Cover Sheet, using the following guidelines:

- a. A small business must be organized for profit, independently owned and operated (not a subsidiary of or controlled by another firm), have no more than 500 employees, and not be dominant in its field. The appropriate box also must be checked when the proposal involves a cooperative effort between an academic institution and a small business.
- b. A minority business must be: (i) at least 51 percent owned by one or more minority or disadvantaged individuals or, in the case of a publicly owned business, have at least 51 percent of the voting stock owned by one or more minority or disadvantaged individuals; and (ii) one whose management and daily business operations are controlled by one or more such individuals.
- c. A woman-owned business must be at least 51 percent owned by a woman or women, who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

<sup>&</sup>lt;sup>14</sup> For consistency with the DHHS conflict of interest policy, in lieu of "organization," NSF is using the term "institution" which includes all categories of proposers.

# 1. Project Summary — Proposal Section A

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and include a statement of objectives, methods to be employed and the potential impact of the project on advancing knowledge, science and mathematics education, and/or human resource development. It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate lay reader.

# 2. Table of Contents — Proposal Section B

A Table of Contents is automatically generated for the proposal by the FastLane system. The proposer cannot edit this form.

# 3. Project Description (Including Results from Prior NSF Support) — Proposal Section C

All proposals to NSF will be reviewed utilizing the merit review criteria described in greater length in Chapter III. The main body of the proposal should be a clear statement of the work to be undertaken and should include: objectives for the period of the proposed work and expected significance; relation to longer-term goals of the Pl's project; and relation to the present state of knowledge in the field, to work in progress by the Pl under other support and to work in progress elsewhere. The statement should outline the general plan of work, including the broad design of activities to be undertaken, an adequate description of experimental methods and procedures and, if appropriate, plans for preservation, documentation, and sharing of data, samples, physical collections and other related research products.

The statement also should indicate any broader impacts of the proposed activity, addressing the following: indicate how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning; discuss any ways in which the proposed activity will broaden the participation of underrepresented groups; if relevant, discuss how the project will enhance the infrastructure for research and/or education, such as facilities, instrumentation, networks, and partnerships; indicate how the results of the project will be disseminated broadly to enhance scientific and technological understanding; and, identify potential benefits of the proposed activity to society at large.

On September 20, 1999, the NSF Director issued Important Notice 125, *Merit Review Criteria*. This Important Notice reminds proposers of the importance of ensuring that, in addition to the criterion relating to intellectual merit, the criterion relating to broader impacts is considered and addressed in the preparation and review of proposals submitted to NSF. The Important Notice also indicates NSF's intent to continue to strengthen its internal processes to ensure that both criteria are appropriately addressed when making funding decisions.

Brevity will assist reviewers and Foundation staff in dealing effectively with proposals. Therefore, the Project Description (including Results from Prior NSF Support, which is limited to five pages) may not exceed 15 pages. Visual materials, including charts, graphs, maps, photographs and other pictorial presentations are included in the 15-page limitation. Conformance to the 15-page limitation will be strictly enforced and may not be exceeded unless a deviation has been specifically authorized. (Chapter II, Section A contains information on deviations.)

#### **Group Proposals**

A group proposal is one submitted by 3 or more investigators whose activities are combined into one administrative unit. In general, group proposals that contain up to ten pages of overall project description (including overall progress under the appropriate prior award) plus up to five pages (per person) of individual project descriptions will be acceptable. Pls who are unsure of the appropriateness of their proposal as a group proposal should contact the cognizant program officer prior to submission. (See also Chapter II, Section C.11.b. for instructions on preparation and submission of collaborative proposals.)

Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided as supplementary documentation and included in Proposal Section I.

The project description only can be submitted to NSF as a PDF file. Conversion to PDF allows the PI to preserve formatting such as bold, underline, and italics. Detailed instructions for creation of the PDF file are available at http://www.fastlane.nsf.gov/a1/pdfcreat.htm. (See also "Special Instructions for Proposals That Contain High Resolution Graphics or Other Graphics Where Exact Color Representations are Required for Proper Interpretation by the Reviewer", Chapter I, Section E.1.)

A proposal for renewed support may be either a "traditional" proposal in which the proposed work is documented and described as fully as though the proposer were applying for the first time; or, an "Accomplishment-Based Renewal" (ABR) proposal, in which the project description is replaced by copies of no more than six reprints <sup>15</sup> of publications resulting from the research supported by NSF during the preceding three to five year period, plus a brief summary of plans for the proposed support period. (See Chapter V, Section B.2 for additional information on preparation of Renewal Proposals.)

All proposals for renewed support of research projects from academic institutions *only* must include, as part of Results from Prior NSF Support, information about any contribution of the completed project to the education and development of human resources in science and engineering at the postdoctoral, graduate and undergraduate levels. Non-academic organizations are exempt from this requirement. (See Chapter V, Section B.2. for more information.)

# **Results from Prior NSF Support**

If **any PI or co-PI** identified on the project has received NSF funding in the past five years, information on the prior award(s) is required. Each PI and co-PI that has received *more than one prior award* (excluding amendments), must report on the award most closely related to the proposal. The following information must be provided:

- a. the NSF award number, amount and period of support;
- b. the title of the project;
- c. summary of the results of the completed work, including, for a research project, any contribution to the development of human resources in science and engineering;
- d. publications resulting from the NSF award;
- e. brief description of available data, samples, physical collections and other related research products not described elsewhere; and
- f. if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

Reviewers will be asked to comment on the quality of the prior work described in this section of the proposal. Please note that the proposal may contain *up to* five pages to describe the results. Results may be summarized in *fewer* than five pages, which would give the balance of the 15-pages for the Project Description.

The Metric Conversion Act of 1975, as amended, and Executive Order 12770 of 1991 encourage Federal agencies to use the Metric System (SI) in procurement, grants and other business-related activities. Proposers are encouraged to use the Metric System of weights and measures in proposals submitted to the Foundation. Grantees are also encouraged to use metric units in reports, publications and correspondence relating to proposals and awards.

 $<sup>^{15}</sup>$  Reprints should be provided as supplementary documentation and included in Proposal Section I.

# 4. References Cited — Proposal Section D

Reference information is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article (or book or journal) title, volume number, page numbers, year of publication, and website address if available electronically. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal.

While there is no established page limitation for the references, this section must include bibliographic citations only and must not be used to provide parenthetical information outside of the 15-page project description.

# 5. Biographical Sketches — Proposal Section E

Biographical sketches are limited to two pages each and are required for all senior project personnel. (See Appendix B for the definition of Senior Personnel.) The following information must be provided in the order and format specified below:

**a. Professional Preparation.** A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

 Undergraduate Institution(s)
 Major
 Degree & Year

 Graduate Institution(s)
 Major
 Degree & Year

 Postdoctoral Institution(s)
 Area
 Inclusive Dates (years)

- **b. Appointments.** A list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.
- c. **Publications.** (i) A list of up to 5 publications most closely related to the proposed project. (ii) A list of up to 5 other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article (or book or journal) title, volume number, page numbers, year of publication, and website address if available electronically.

For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included. Only the list of 10 will be used in the review of the proposal.

d. Synergistic Activities. A list of up to five examples that demonstrate the broader impact of the individual's professional and scholarly activities that focus on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

#### e. Collaborators & Other Affiliations

- (i) Collaborators. A list of all persons in alphabetical order (including their current organizational affiliations) who are currently or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of this proposal. Include collaborators on this proposal. If there are no collaborators, this should be so indicated.
- (ii) Graduate and Postdoctoral Advisors. A list of the names of the individual's own graduate advisor(s) and principal postdoctoral sponsor(s), and their current organizational affiliations.

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor. A list of all persons (including their organizational affiliations), over the last five years with whom the individual has had an association as thesis advisor or postgraduate-scholar sponsor. The total number of graduate students advised and postdoctoral scholars sponsored also must be identified.

The information in part e of the biographical sketch is used to help identify potential conflicts or bias in the selection of reviewers.

For the personnel categories listed below, the proposal also may include information on exceptional qualifications that merit consideration in the evaluation of the proposal.

- a. Postdoctoral associates
- b. Other professionals
- c. Students (research assistants)

For equipment proposals, the following must be provided for each auxiliary user:

- a. Short biographical sketch
- b. List of up to five publications most closely related to the proposed acquisition

# 6. Budget — Proposal Section F

Each proposal must contain a budget for each year of support requested and a cumulative budget for the full term of requested NSF support, unless a particular program solicitation stipulates otherwise. Completion of the budget does not eliminate the need to document and justify the amounts requested in each category. A budget justification of up to three pages is authorized to provide the necessary justification and documentation.

The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary to perform the proposed work and are not precluded by specific program guidelines or applicable cost principles.

A full discussion of the budget and the allowability of selected items of cost is contained in the following sections, the GPM, as well as other NSF program solicitations.

#### Salaries and Wages (Lines A and B on the Proposal Budget)

#### (i) Policies

As a general policy, NSF recognizes that salaries of faculty members and other personnel associated directly with the project constitute appropriate direct costs and may be requested in proportion to the effort devoted to the project.

NSF regards research as one of the normal functions of faculty members at institutions of higher education. Compensation for time normally spent on research within the term of appointment is deemed to be included within the faculty member's regular organizational salary. Grant funds may not be used to augment the total salary or rate of salary of faculty members during the period covered by the term of faculty appointment or to reimburse faculty members for consulting or other time in addition to a regular full-time organizational salary covering the same general period of employment. Exceptions may be considered under certain NSF science and engineering education program solicitations for weekend and evening classes or for administrative work done as overload. (See GPM Section 611.)

Summer salary for faculty members on academic-year appointments is limited to no more than twoninths of their regular academic-year salary. This limit includes summer salary received from all NSF-funded grants. These same principles apply to other types of non-academic organizations, such as research institutes. Since their employment periods are usually annual, salary must be shown under "calendar months." For such persons, "summer salary" is normally inappropriate under an NSF grant.

Sometimes an independent institute or laboratory proposes to employ college or university faculty members on a part-time basis. In such cases, the general intent of the policies above apply, so that an individual's total income will not be augmented in ways that would not be possible under a grant to an academic institution.

In most circumstances, particularly for institutions of higher education, salaries of administrative or clerical staff are included as part of indirect costs (also known as Facilities and Administrative Costs (F&A) for Colleges and Universities). Salaries of administrative or clerical staff may be requested as direct costs, however, for a project requiring an extensive amount of administrative or clerical support and where these costs can be readily and specifically identified with the project with a high degree of accuracy. The circumstances for requiring direct charging of these services must be clearly described in the budget justification. Such costs, if not clearly justified, may be deleted by NSF.

#### (ii) Procedures

The names of the PI(s), faculty, and other senior personnel and the estimated number of full-time-equivalent academic-year, summer, or calendar-year person-months for which NSF funding is requested and the rates of pay, must be listed. For postdoctoral associates and other professionals, each position must be listed, with the number of full-time-equivalent person-months and rate of pay (hourly, monthly or annual). For graduate and undergraduate students, secretarial, clerical, technical, etc., whose time will be charged directly to the project, only the total number of persons and total amount of salaries per year in each category is required. Salaries requested must be consistent with the organization's regular practices.

The budget may request funds for support of graduate or undergraduate research assistants to help carry out the proposed research. Compensation classified as salary payments must be requested in the salaries and wages category. Any direct costs requested for tuition remission must be listed in the "Other" category under "Other Direct Costs".

#### (iii) Confidential Budgetary Information

The proposing organization may request that salary data on senior personnel not be released to persons outside the Government during the review process. In such cases, the item for senior personnel salaries in the proposal may appear as a single figure and the person-months represented by that amount omitted. If this option is exercised, senior personnel salaries and person-months must be itemized in a separate statement, a single copy of which must accompany the signed Cover Sheet. This statement must include all of the information requested on the Proposal Budget for each person involved. NSF will not forward the detailed information to reviewers and will hold it privileged to the extent permitted by law. The information on senior personnel salaries will be used as the basis for determining the salary amounts shown in the grant budget. The box for "Proprietary and Privileged Information" must be checked on the Cover Sheet when the proposal contains confidential budgetary information. The salary information of the cover Sheet when the proposal contains confidential budgetary information.

#### b. Fringe Benefits (Line C on the Proposal Budget)

If the grantee's usual accounting practices provide that its contributions to employee benefits (social security, retirement, etc.) be treated as direct costs, NSF grant funds may be requested to defray such expenses as a direct cost, but only in proportion to salaries and wages requested in the budget.

 $<sup>^{16}</sup>$  See Chapter I, Section E.2. for additional instructions on submission of the signed Cover Sheet.

<sup>&</sup>lt;sup>17</sup>See FastLane proposal preparation instructions at http://www.fastlane.nsf.gov/a1/newstan.htm for further instructions.

#### c. Equipment (Line D on the Proposal Budget)

Equipment is defined as an item of property that has an acquisition cost of \$5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. Items of needed equipment must be listed individually by description and estimated cost, including tax, and adequately justified. Allowable items ordinarily will be limited to research equipment and apparatus not already available for the conduct of the work. General purpose equipment, such as a personal computer, is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research. (See Chapter II, Section C.6.f.(iv).)

#### d. Travel (Line E on the Proposal Budget)

#### (i) General

Travel and its relation to the proposed activities must be specified and itemized by destination and cost. Funds may be requested for field work, attendance at meetings and conferences, and other travel associated with the proposed work, including subsistence. In order to qualify for support, however, attendance at meetings or conferences must enhance the PI's ability to perform the work, plan extensions of it, or disseminate its results.

Allowance for air travel normally will not exceed the cost of round-trip, economy air fares. (See also GPM Section 614.) Persons traveling under NSF grants must travel by US-flag carriers, if available.

#### (ii) Domestic Travel

For budget purposes, domestic travel includes travel in the US, its possessions, Puerto Rico, and travel to Canada and Mexico.

#### (iii) Foreign Travel

For budget purposes, travel outside the areas specified above is considered foreign. The proposal must include relevant information, including countries to be visited (also enter names of countries on the Proposal Budget), dates of visit, if known, and justification for any foreign travel planned in connection with the project.

Travel support for dependents of key project personnel may be requested only when **all** of the following conditions apply:

- (a) the individual is a key person who is essential to the research on a full-time basis;
- (b) the individual's residence away from home and in a foreign country is for a continuous period of six months or more and is essential to the effective performance of the project; and
- (c) the dependent's travel allowance is consistent with the policies of the organization administering the grant.

#### e. Participant Support (Line F on the Proposal Budget)

This budget category refers to costs of transportation, per diem, stipends and other related costs for participants or trainees (but not employees) in connection with NSF-sponsored conferences, meetings, symposia, training activities and workshops. (See Chapter II, Section C.11.f) Generally, indirect costs (F&A) are not allowed on participant support costs. The number of participants to be supported must be entered in the parentheses on the Proposal Budget. These costs also must be justified in the budget justification section of the proposal. Some programs, such as *Research Experiences for Undergraduates* (NSF 00-107) have special instructions for treatment of participant support. See relevant program solicitation for further information.

16

# f. Other Direct Costs (Lines G1 through G6 on the Proposal Budget)

Any costs charged to an NSF grant must be reasonable and directly allocable to the supported activity. The budget must identify and itemize other anticipated direct costs not included under the headings above, including materials and supplies, publication costs, computer services and consultant services. Examples include aircraft rental, space rental at research establishments away from the grantee organization, minor building alterations, payments to human subjects, service charges, tuition remission, and construction of equipment or systems not available off the shelf. Reference books and periodicals may be charged to the grant only if they are specifically required for the project.

#### (i) Materials and Supplies (Line G1 on the Proposal Budget)

The budget must indicate the general types of expendable materials and supplies required, with their estimated costs. The breakdown should be more detailed when the cost is substantial.

#### (ii) Publication/Documentation/Dissemination (Line G2 on the Proposal Budget)

The budget may request funds for the costs of documenting, preparing, publishing or otherwise making available to others the findings and products of the work conducted under the grant. This generally includes the following types of activities: reports, reprints, page charges or other journal costs (except costs for prior or early publication); necessary illustrations; cleanup, documentation, storage and indexing of data and databases; development, documentation and debugging of software; and storage, preservation, documentation, indexing, etc., of physical specimens, collections or fabricated items.

#### (iii) Consultant Services (Line G3 on the Proposal Budget)

Anticipated consultant services must be justified and information furnished on each individual's expertise, primary organizational affiliation, normal daily compensation rate, and number of days of expected service. Consultants' travel costs, including subsistence, also may be included. Payment for a consultant's services, exclusive of expenses, may not exceed the consultant's normal rate or the daily maximum rate established annually by NSF, whichever is less.<sup>18</sup>

#### (iv) Computer Services (Line G4 on the Proposal Budget)

The cost of computer services, including computer-based retrieval of scientific, technical and educational information, may be requested. A justification based on the established computer service rates at the proposing organization must be included. The budget also may request costs, which must be shown to be reasonable, for leasing of automated data processing equipment. Special purpose computers or associated hardware and software, other than general purpose PCs, may be requested as items of equipment and justified in terms of their necessity for the activity proposed.

#### (v) Subawards (Line G5 on the Proposal Budget)

Except for the procurement of such items as commercially available supplies, materials, equipment or general support services allowable under the grant, no significant part of the research or substantive effort under an NSF grant may be contracted or otherwise transferred to another organization without prior NSF authorization. The intent to enter into such arrangements must be disclosed in the proposal. At a minimum, the disclosure must include a clear description of the work to be performed, the basis for selection of the subawardee (except for collaborative/joint arrangements), and a separate budget in the prescribed NSF format for each subaward, signed by an authorized representative of the

<sup>&</sup>lt;sup>18</sup>The current maximum consultant daily rate is available at http://www.nsf.gov/bfa/cpo/policy/ques.htm.

<sup>&</sup>lt;sup>19</sup> The term "subaward" also includes contracts, subcontracts and other arrangements.

organization receiving the subaward. Collaborative/joint arrangements may include closely related and coordinated activities at another organization; a joint activity by several organizations or a consortium; group proposals from multiple organizations, etc. The total amount for proposed subawards, not included elsewhere, must be entered on Line G.5. in the Proposal Budget for the project. Budgets signed by the authorized organizational representative of the subawardee organization must be forwarded to the proposing organization and accompany the proposing organization's signed Cover Sheet.

# (vi) Other (Line G6 on the Proposal Budget)

Any other directs costs not specified in Lines G1 through G5 must be identified on Line G6. Such costs must be itemized and justified in the budget justification.

#### g. Total Direct Costs (Line H on the Proposal Budget)

The total amount of direct costs requested by the proposer, to include Lines A through G, must be entered on Line H.

# h. Indirect Costs (also known as Facilities and Administrative Costs (F&A) for Colleges and Universities) (Line I on the Proposal Budget)

The applicable indirect cost rate(s) negotiated by the organization with the cognizant Federal negotiating agency must be used in computing indirect costs (F&A) for a proposal. If an organization has no established indirect cost rate, it should contact the Cost Analysis/Audit Resolution Branch of NSF's Division of Contracts, Policy and Oversight. An organization may obtain guidelines for submitting rate proposals from that Branch, telephone (703) 292-8244. These guidelines also are available electronically at http://www.nsf.gov/bfa/cpo/oversite/indirect.htm. Within Government guidelines, unless otherwise indicated in a specific program solicitation, it is NSF policy that grantees are entitled to reimbursement from grant funds for indirect costs (F&A) allocable to the NSF share of allowable direct costs of a project, except grants:

- solely for the support of travel, equipment, construction of facilities, or doctoral dissertations;
- for participant support costs;
- to foreign grantees; and
- to individuals (i.e., Fellowship awards).

#### i. Total Direct and Indirect Costs (F&A) (Line J on the Proposal Budget)

The total amount of direct and indirect costs (F&A) (sum of Lines H and I) must be entered on Line J.

#### j. Residual Funds (Line K on the Proposal Budget)

This line is used only for budgets for incremental funding requests on continuing grants. Grantees must provide a rationale for residual funds in excess of 20% as part of the annual project report.

#### k. Amount of This Request (Line L on the Proposal Budget)

The total amount of funds requested by the proposer will be the same as the amount entered on Line J unless the Foundation disapproves the carry-over of residual funds. If disapproved, Line L will be equal to Line J minus Line K.

18

# I. Cost Sharing (Line M on the Proposal Budget)

In accordance with Congressional requirements (see GPM 330), NSF requires that each grantee share in the cost of research projects resulting from unsolicited proposals.<sup>20</sup> The grantee may meet the statutory cost sharing requirement by choosing either of two alternatives:

- 1. by cost sharing a minimum of one percent on the project; or
- 2. by cost sharing a minimum of one percent on the aggregate costs of all NSF-supported projects requiring cost sharing.

The statutory cost sharing referenced above is not required for grants that provide funds solely for the following purposes (not considered to be support of "research"), although such awards may be subject to other cost sharing requirements identified in a specific solicitation:

- 1. international travel;
- 2. construction, improvement or operation of facilities;
- 3. acquisition of research equipment;
- 4. ship operations;
- education and training;
- 6. publication, distribution and translation of scientific data and information;
- 7. symposia, conferences and workshops; and
- 8. special studies authorized or required by Subsections 3a(5) through 3a(7) of the NSF Act, as amended.

For research proposals submitted solely in response to the Grant Proposal Guide, only the statutory cost sharing amount (1%) is required. Such amounts should not be entered on Line M of the proposal budget. If organizational or other commitments in excess of NSF's statutory requirement are voluntarily included in the proposal, the amount of these contributions must be included on Line M of the proposal budget. The sources and amounts must be included in the budget justification. Any amount listed on Line M shall be included as a condition of the award, should an award ultimately be made.

Proposals submitted in response to NSF solicitations may be subject to special cost sharing requirements. Proposers are advised that all cost sharing commitments, if incorporated into the award, are subject to audit.

The estimated value of any in-kind contributions should be included on Line M. An explanation of the source, nature, amount and availability of any proposed cost sharing also must be provided in the budget justification.<sup>21</sup> It should be noted that contributions derived from other Federal funds or counted as cost sharing toward projects of another Federal agency may not be counted towards meeting the specific cost sharing requirements of the NSF grant. Failure to provide the level of cost sharing reflected in the approved grant budget may result in termination of the NSF grant, disallowance of grant costs and/or refund of grant funds to NSF.

<sup>&</sup>lt;sup>20</sup> In addition to proposals submitted solely in response to the *Grant Proposal Guide*, proposals submitted in response to NSF program announcements are considered unsolicited and are therefore subject to the statutory cost sharing requirement. Proposals submitted in response to program solicitations are considered "solicited". This means that the resulting awards are not subject to statutory cost sharing. Cost sharing is not required unless explicitly included in the solicitation.

21 Section .23 of OMB Circular A-110 describes criteria and procedures for the allowability of cash and in-kind contributions in satisfying

cost sharing and matching requirements.

#### m. Unallowable Costs

Proposers should be familiar with the complete list of unallowable costs that is contained in the applicable cost principles. Because of their sensitivity, the following categories of unallowable costs are highlighted:

#### (i) Entertainment

Costs of entertainment, amusement, diversion and social activities and any costs directly associated with such activities (such as tickets to shows or sports events, meals, lodging, rentals, transportation and gratuities) are unallowable. Expenses of grantee employees who are not on travel status are unallowable. This includes cases where they serve as hosts or otherwise participate at meals that are primarily social occasions involving speakers or consultants. Costs of employees on travel status are limited to those allowed under the governing cost principles for travel expenses. (See GPM Section 614.)

#### (ii) Meals and Coffee Breaks

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

# (iii) Alcoholic Beverages

No NSF funds may be spent on alcoholic beverages.

# 7. Current and Pending Support — Proposal Section G

This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed. The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel must be included, even if they receive no salary support from the project(s). The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months per year to be devoted to the project, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including NSF. Concurrent submission of a proposal to other organizations will not prejudice its review by NSF. Note the Biological Sciences Directorate exception to this policy however, delineated in Chapter I, Section A.

If the project now being submitted has been funded previously by a source other than NSF, the information requested in the paragraph above must be furnished for the last period of funding.

# 8. Facilities, Equipment and Other Resources — Proposal Section H

This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Proposers must describe only those resources that are directly applicable.

# 9. Special Information and Supplementary Documentation — Proposal Section I

Except as specified below, special information and supplementary documentation must be part of the project description (or part of the budget justification) if it is relevant to determining the quality of the proposed work. Information in the following areas should be included in Section I and not counted as part of the 15-page project description limitation. This Special Information and Supplementary Documentation section is not considered an appendix. Specific guidance on the need for additional documentation may be obtained from the organization's sponsored projects office or in the references cited below.

- Rationale for performance of all or part of the project off-campus or away from organizational headquarters. (GPM Section 633)
- Documentation of collaborative arrangements of significance to the proposal through letters of commitment. (GPG Chapter II, Section C.11)
- Environmental impact statement for activities that have an actual or potential impact on the environment. (GPM Section 830) Where applicable, the box for "National Environmental Policy Act" must be checked on the Cover Sheet.
- Work in foreign countries. Some governments require nonresidents to obtain official approval to carry out investigations within their borders and coastal waters under their jurisdiction. Pls are responsible for obtaining the required authorizations and for advising NSF that they have been obtained or requested. Advance coordination should minimize disruption of the research. (GPM Section 763)
- Research in the Antarctic and Greenland. (GPM Section 763)
- Research in a location designated, or eligible to be designated, a registered historic place. (GPM Section 840) Where applicable, the box for "Historic Places" must be checked on the Cover Sheet.
- Research involving field experiments with genetically engineered organisms. (GPM Section 712)
- Documentation regarding research involving the use of human subjects, hazardous materials, vertebrate animals, or endangered species. (GPM Section 710, GPG Chapter II, Sections C.11.d and e)
- Projects that involve technology utilization/transfer activities, that require a management plan, or that involve special reports or final products.
- Special components in new proposals or in requests for supplements, such as Facilitation Awards for Scientists and Engineers with Disabilities, Research Opportunity Awards or Research Experiences for Undergraduates (See NSF 00-107 for information.)
- Research in Undergraduate Institutions. (See program solicitation for information.)
- Research Experiences for Undergraduates. (See program solicitation for REU site proposals [NSF 00-107] for further information.)

In addition, the supplementary documentation section should alert NSF officials to unusual circumstances that require special handling, including, for example, proprietary or other privileged information in the proposal, matters affecting individual privacy, required intergovernmental review under E.O. 12372 (*Intergovernmental Review of Federal Programs*) for activities that directly affect State or local governments, or possible national security implications.

# 10. Appendices — Proposal Section J

All information necessary for the review of a proposal must be contained in Sections A through I of the proposal. **Appendices may not be included unless a deviation has been authorized.** Chapter II, Section A. contains information on deviations.

#### 11. Special Guidelines

#### a. Small Grants for Exploratory Research (SGER) Proposals

Proposals for small-scale, exploratory, high-risk research in the fields of science, engineering and education normally supported by NSF may be submitted to individual programs. Such research is characterized as:

- preliminary work on untested and novel ideas;
- ventures into emerging research ideas;

- application of new expertise or new approaches to "established" research topics;
- having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural disasters and similar unanticipated events; or
- efforts of similar character likely to catalyze rapid and innovative advances.

Investigators are **strongly encouraged** to contact the NSF program(s) most germane to the proposal topic before submitting an SGER proposal. This will facilitate determining whether the proposed work meets the guidelines described above and availability and appropriateness for SGER funding, or whether the work is more appropriate for submission as a fully reviewed proposal. The project description must be brief (two to five pages) and include clear statements as to why the proposed research should be considered particularly exploratory and high risk, the nature and significance of its potential impact on the field, and why an SGER grant would be a suitable means of supporting the work.

Brief biographical information is required for the PI and co-PI(s) only, and must list no more than five significant publications or other research products. The box for "Small Grant for Exploratory Research" must be checked on the Cover Sheet.

These proposals will be subject to internal NSF merit review only. Renewed funding of SGER awards may be requested only through submission of a non-SGER proposal that will be subject to full merit review. The maximum SGER award amount will not exceed \$100,000. Although the maximum award amount is \$100,000, the award amount usually will be substantially less than a given program's average award amount. The project's duration will normally be one year, but may be up to two years.

For participating directorates and at the discretion of the Program Officer, with the concurrence of the Division Director, a small fraction of especially promising SGER awards may be extended for a period of six additional months and supplemented with up to \$50,000 in additional funding.<sup>22</sup> The SGER award extensions will be possible for awards of two-year initial duration as well as for those of shorter initial duration. Requests for extensions must be submitted one to two months before the expiration date of the initial award. A project report and outline of proposed research, not to exceed five pages, must be included.

#### b. Collaborative Proposals

A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. Collaborative proposals may be submitted to NSF in one of two methods: as a single proposal, in which a single award is being requested (with subawards administered by the lead organization); or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award. In either case, the lead organization's proposal must contain all of the requisite sections as a single package to be provided to reviewers (that will happen automatically when procedures below are followed.) All collaborative proposals must clearly describe the roles to be played by the other organizations, specify the managerial arrangements, and explain the advantages of the multi-organizational effort within the project description. Pls are strongly encouraged to contact the cognizant NSF Program Officer prior to submission of a collaborative proposal.

#### (i) Submission of a single proposal

The single proposal method allows investigators from two or more institutions who have developed an integrated research project to submit a single, focused proposal. A single investigator bears primary responsibility for the administration of the grant and discussions with NSF, and, at the discretion of the organizations involved, investigators from any of the participating institutions may be designated as co-Pls.

<sup>&</sup>lt;sup>22</sup>The Biological Sciences and Education and Human Resources Directorates do not permit the extension or supplementation of SGER awards.

By submission of the proposal, the organization has determined that the proposed activity is administratively manageable. NSF may request a revised proposal, however, if it considers that the project is so complex that it will be too difficult to review or administer as presented. (See Chapter II, Section C.6.f.(v) for additional instructions on preparation of this type of proposal.)

# (ii) Simultaneous submission of proposals from different organizations

In many instances, simultaneous submission of proposals that contain the same project description from each organization might be appropriate. For these proposals, the project title must begin with the words "Collaborative Research:" The lead organization's submission will include a cover sheet, project summary, project description, references cited, biographical sketches, budgets and budget justification, current and pending support, and facilities, equipment and other resources for their organization. Non-lead organization submissions will include all of the above for their organization **except** the project summary, project description, and references cited which are the same for all collaborating organizations. FastLane will combine the proposal submission for printing or electronic viewing.

To submit the collaborative proposal, the following two step process must be completed:29

- (a) Before the lead organization submits its proposal, each non-lead organization must provide to the lead organization the temporary proposal ID generated by FastLane when the non-lead proposal is being created. The lead organization must then enter each non-lead organization(s) temporary proposal ID into the FastLane lead proposal by using the "Link Collaborative Proposals" option found on the FastLane "Form Preparation" screen. This provides an electronic link to all of the non-lead proposals for printing.
- (b) To facilitate the lead organization's role in submitting the proposal, each non-lead organization must also provide its official (not temporary) proposal number (assigned on proposal submission) to the lead organization. The lead organization should then include a list of these collaborative proposal numbers with its signed Cover Sheet.

#### c. Proposals for Equipment

Proposals for specialized equipment may be submitted by an organization for: (1) individual investigators; (2) groups of investigators within the same department; (3) several departments; (4) organization(s) participating in a collaborative or joint arrangement; (5) any components of an organization; or (6) a region. One individual must be designated as PI. Investigators may be working in closely related areas or their research may be multidisciplinary.

**Note:** Many organizations within NSF have formal instrumentation programs that may include special guidelines such as cost sharing or other requirements. It is important to use the applicable guidelines in these competitions. The appropriate program should be consulted.

Instrumentation and equipment proposals must follow the format of research proposals. Each potential major user must describe the project(s) for which the equipment will be used. These descriptions must be succinct, not necessarily as detailed as in an individual research proposal, and must emphasize the intrinsic merit of the activity and the importance of the equipment to it. A brief summary will suffice for auxiliary users.

Equipment to be purchased, modified or constructed must be described in sufficient detail to allow comparison of its capabilities with the needs of the proposed activities. Equipment proposals must also describe comparable equipment already at the proposing organization(s) and explain why it cannot be used. This includes comparable government-owned equipment that is on-site.

<sup>&</sup>lt;sup>23</sup> Detailed instructions for preparation and submission of collaborative proposals are available on the FastLane website at http://www.fastlane.nsf.gov/a1/newstan.htm#collaborative.

Equipment proposals must discuss arrangements for acquisition, maintenance and operation, including:

- overall acquisition plan;
- biographical sketch of the person(s) who will have overall responsibility for maintenance and operation and a brief statement of qualifications, if not obvious; description of the physical facility, including floor plans or other appropriate information, where the equipment will be located;
- statement of why the equipment is severable or non-severable from the physical facility;
- annual budget for operation and maintenance of the proposed equipment, indicating source of funds, and particularly related equipment; and
- brief description of other support services available and the annual budget for their operation, maintenance and administration.

The terms of a grant require that special-purpose equipment purchased or leased with grant funds be subject to reasonable inventory controls, maintenance procedures and organizational policies that enhance its multiple or shared use on other projects, if such use does not interfere with the work for which the equipment was acquired.

If the government retains title, those items must be included in the annual inventory submitted to the NSF Property Administrator. Equipment proposals must include the information described above within the 15-page project description. These proposals normally compete with proposals for research or education projects.

# d. Proposals Involving Vertebrate Animals

For proposals involving the use of vertebrate animals, sufficient information must be provided within the 15-page project description to allow for evaluation of the choice of species, number of animals to be used, and any necessary exposure of animals to discomfort, pain or injury. All projects involving vertebrate animals must have approval from the organization's Institutional Animal Care and Use Committee (IACUC) prior to the issuance of an NSF award. The box for "Vertebrate Animals" must be checked on the Cover Sheet with the IACUC approval date (if available) identified in the space provided. If the IACUC has not reviewed the proposed work, the proposer should include the date at which the review is scheduled to be completed.

# e. Proposals Involving Human Subjects

Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the Common Rule (*Federal Policy for the Protection of Human Subjects*, 45 CFR §690). All projects involving human subjects must either: (1) have approval from the organization's Institutional Review Board (IRB) before issuance of an NSF award; or (2) identify the applicable subsection exempting the proposal from IRB review, as established in Section 101(b) of the Common Rule. The box for "Human Subjects" must be checked on the Cover Sheet with the IRB approval date (if available) or exemption subsection from the Common Rule identified in the space provided.

#### f. Proposals for Conferences, Symposia and Workshops

NSF supports conferences, symposia and workshops in special areas of science and engineering that bring experts together to discuss recent research or education findings or to expose other researchers or students to new research and education techniques. NSF encourages the convening in the US of major international conferences, symposia and workshops. Conferences will be supported only if equivalent results cannot be obtained at regular meetings of professional societies. Although requests for support of conferences, symposia and workshops ordinarily originate with educational institutions or scientific societies, they also may come from other groups. Shared support by several Federal agencies, States or private organizations is encouraged. Because proceedings of such conferences normally should be published in professional journals, requests for support may include publication costs. Requests should generally be

made at least a year in advance of the scheduled date. Conferences or meetings, including the facilities in which they are held, funded in whole or in part with NSF funds, must be accessible to participants with disabilities.

A conference, symposium or workshop proposal (that complies with the page and font size instructions in Chapter II, Section B) must contain the following elements:

- Cover Sheet for Proposal to the National Science Foundation (NSF Form 1207);
- Summary of one page or less indicating the objectives of the project;
- Statement of the need for such a gathering and a list of topics;
- Recent meetings on the same subject, including dates and locations;
- Names of the chairperson and members of organizing committees and their organizational affiliations;
- Information on the location and probable date(s) of the meeting and the method of announcement or invitation:
- Statement of how the meeting will be organized and conducted, how the results of the meeting will be disseminated and how the meeting will contribute to the enhancement and improvement of scientific, engineering and/or educational activities;
- ❖ Estimated total budget for the conference, together with an itemized statement of the amount of support requested from NSF; (The budget may include participant support for transportation (when appropriate), per diem costs, stipends, publication and other conference-related costs. Participant support costs must be excluded from the indirect cost base. (See Chapter II, Section C.6.e.); and
- Support requested or available from other Federal agencies and other sources. (Chapter II, Section C.7 should be consulted to prepare this portion of the proposal.)

For additional coverage on allowability of costs associated with meetings and conferences, proposers should consult GPM Section 625.

#### g. Proposals to Support International Travel

Proposals for travel support for US participation in international scientific and engineering meetings held abroad are handled by the NSF organizational unit with program responsibility for the area of research interest.

Group travel awards are encouraged as the primary means of support for international travel. A university, professional society or other non-profit organization may apply for funds to enable it to coordinate and support US participation in one or more international scientific meeting(s) abroad. Group travel grants may include as compensation for the grantee a flat rate of \$50 per traveler for general administrative costs of preparing announcements, evaluating proposals and handling travel arrangements customarily associated with this type of project. (See GPM Section 765.) Group travel grantees are required to retain supporting documentation that funds were spent in accordance with the original intent of the proposal. Such documentation may be required in final reports and is subject to audit.

#### h. Proposals for Doctoral Dissertation Research

NSF awards grants in support of doctoral dissertation research in some disciplines, primarily field research in the environmental, behavioral and social sciences. Support may be sought through those disciplinary programs and, in cases involving research abroad, through the Division of International Programs. The thesis advisor or concerned faculty member submits proposals on behalf of the graduate student. Further information can be obtained from the cognizant program office.